§ 161.013–1 Applicability.

(a) This subpart establishes standards for electric distress lights for boats.

(b) [Reserved]

§ 161.013–3 General performance requirements.

(a) Each electric light must:

(1) Emit a white light which meets the intensity requirements of § 161.013–5;

(2) Be capable of automatic signaling in a manner which meets the requirements of § 161.013–7;

(3) Contain an independent power source which meets the requirements of § 161.013–9;

(4) Float in fresh water with the lens surface at or above the surface of the water;

(5) Be equipped with a waterproof switch; and

(6) Meet the requirement of paragraphs (a) (1) through (4) of this section after floating for at least 72 hours followed by submersion in 5% by weight sodium chloride solution for at least 2 hours.

(b) The electric light may not be equipped with a switch mechanism which permits continuous display of a beam of light except that the light may be equipped with a switch which returns to the off position when pressure is released.

§ 161.013–5 Intensity requirements.

(a) If an electric light emits light over an arc of the horizon of 360 degrees, the light must:

(1) When level, have a peak intensity within 0.1 degrees of the horizontal plane;

(2) Have a peak Equivalent Fixed Intensity of at least 75 cd; and,

(3) Have a minimum Equivalent Fixed Intensity within a vertical divergence of ±3 degrees of at least 15 cd.

(b) If an electric light emits a directional beam of light, the light must:

(1) Have an Equivalent Fixed Intensity of no less than 25 cd within ±4 degrees vertical and ±4 degrees horizontal divergence centered about the peak intensity; and,

(2) Have a minimum peak Equivalent Fixed Intensity of 2,500 cd.

(c) The Equivalent Fixed Intensity (EFI) is the intensity of the light corrected for the length of the flash and is determined by the formula:

$$EFI = I \times (t_c - t_i) / 0.2 + (t_c - t_i)$$

Where:

I is the measured intensity of the fixed beam,
t_c is the contact closure time in seconds, (0.33 for this S-O-S signal), and
t_i is the incandescence time of the lamp in seconds.

(d) An electric light which meets the requirements of either paragraph (a) or (b) of this section need not, if capable of operating in both manners, meet the requirements of the other paragraph.

§ 161.013–7 Signal requirements.

(a) An electric light must have a flash characteristic of the International Morse Code for S-O-S and, under design conditions,

(1) Each short flash must have a duration of ⅓ second;

(2) Each long flash must have a duration of 1 second;

(3) The dark period between each short flash must have a duration of ⅓ second;

(4) The dark period between each long flash must have a duration of ⅓ second;

(5) The dark period between each letter must have a duration of 2 seconds;

(6) The dark period between each S-O-S signal must have a duration of 3 seconds.

(b) The flash characteristics described in paragraph (a) must be produced automatically when the signal is activated.

§ 161.013–9 Independent power source.

(a) Each independent power source must be capable of powering the light so that it meets the requirements of § 161.013–3(a)(1) and emits a recognizable flash characteristic of the International Morse Code for S-O-S at a rate of between 3 and 5 times per minute after six hours of continuous display of the signal.

(b) If the independent power source is rechargeable, it must have a waterproof recharger designed for marine use.

(c) If the independent power source requires external water to form an electrolyte, it must operate in sea water and fresh water.

§ 161.013–11 Prototype test.

(a) Each manufacturer must test a prototype light identical to the lights to be certified prior to the labeling required by § 161.013–13.

(b) If the prototype light fails to meet any of the general performance requirements of § 161.013–3 the lights must not be certified under this subpart.

(c) Each manufacturer must:

(1) Forward the test results within 30 days to the Commandant (CG-ENG), Attn: Office of Design and Engineering Systems, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue, SE., Washington, DC 20593-7509; and

(2) Retain records of the test results for at least 5 years, or as long as the light is manufactured and certified, whichever is longer.

[CGD 76–183a, 44 FR 73054, Dec. 17, 1979, as amended by CGD 88–070, 53 FR 34536, Sept. 7, 1988; CGD 95–072, 60 FR 50467, Sept. 29, 1995; CGD 96–041, 61 FR 50734, Sept. 27, 1996; USCG–2013–0671, 78 FR 60160, Sept. 30, 2013]

§ 161.013–13 Manufacturer certification and labeling.

(a) Each electric light intended as a Night Visual Distress Signal required by 33 CFR part 175 must be certified by the manufacturer as complying with the requirements of this subpart.

(b) Each electric light must be legibly and indelibly marked with:

(1) Manufacturer's name;

(2) Replacement battery type;

(3) Lamp size; and

(4) The following words—

''Night Visual Distress Signal for Boats Complies with U. S. Coast Guard Requirements in 46 CFR 161.013. For Emergency Use Only.''

(c) If an electric light is designed for use with dry cell batteries the label must advise the consumer on the battery replacement schedule which under normal conditions would maintain performance requirements of § 161.013–3.

§ 161.013–17 Manufacturer notification.

Each manufacturer certifying lights in accordance with the specifications of this subpart must send written notice to the Commandant (CG-ENG), Attn: Office of Design and Engineering Systems, U.S. Coast Guard Stop 7509, 2703 Martin Luther King Jr. Avenue, SE., Washington, DC 20593-7509 within 30 days after first certifying them, and send a new notice every five years thereafter as long as it certifies lights.

[CGD 76–183a, 44 FR 73054, Dec. 17, 1979, as amended by CGD 88–070, 53 FR 34536, Sept. 7, 1988; CGD 95–072, 60 FR 50467, Sept. 29, 1995; CGD 96–041, 61 FR 50733, Sept. 27, 1996; USCG–2013–0671, 78 FR 60160, Sept. 30, 2013]

PART 162—ENGINEERING EQUIPMENT

Subpart 162.017—General Provisions; Valves, Pressure-Vacuum Relief, for Tank Vessels

Sec.

Subpart 162.018—Safety Relief Valves, Liquefied Compressed Gas

Subpart 162.027—Combination Solid Stream and Water Spray Firehose Nozzles

Subpart 162.028—Extinguishers, Fire, Portable, Marine Type